

**FY 05 TEST FISHERIES AND TEST FISH FUNDS
IN THE SOUTHEAST ALASKA REGION**



TEST FISH FUND PROJECT RED BOOK 2005

Alaska Department of Fish and Game
Division of Commercial Fisheries
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Douglas, AK 99824

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EXECUTIVE SUMMARY

The Southeast Region Test Fish Fund program consists of 15 projects ranging from test fisheries to determine abundance of salmon and groundfish to herring and shellfish biological sampling and revenue generation to offset costs for new commercial fisheries. Total revenues from test fisheries in Southeast Alaska have averaged \$492,000 during Fiscal years 2001–2004 (Table 1). Test Fish revenues have added approximately \$500,000 to the region's budget during the first half of FY 2006.

Table 1. Test fishery revenues for Southeast Alaska, FY2001–2005.

Program	Revenue FY2005	Revenue FY2004	Revenue FY2003	Revenue FY2002	Revenue FY2001	FY2001– 2004 Average
Salmon	\$117.3	\$65.6	\$58.6	\$104.2	\$177.6	\$101.50
Herring	\$133.9	\$62.1	\$56.9	\$112.1	\$86.0	\$79.28
Groundfish	\$336.5	\$349.5	\$314.8	\$290.0	\$259.6	\$303.48
Shellfish	\$31.7 ^a	\$5.6	\$8.0	\$11.0	\$10.2	\$8.70
Total	\$619.4	\$482.8	\$438.3	\$517.3	\$533.4	\$492.95

^a Beginning in FY 2005 revenue from buoy or pot tags required by Board of Fisheries marking regulations is recorded as SDPR and not as test fish, however \$26.4k is included as shellfish revenue in FY05 since it was carried over from FY04.

The total Test Fish receipt authority for Southeast Alaska in FY2005 was **\$600,000**. A total of **\$619,400** in revenue was generated from all test fisheries in Southeast Alaska in FY2005. Of the total, 4% of that revenue was generated from sales of crab and herring buoy stickers as a FY2004 carry over. A total of **\$593,000** was generated from actual harvest of groundfish, herring, salmon, and shellfish stocks in the region in FY 2005 or carried forward from FY2004. Of the total revenue generated from test fishery harvests, 57% was generated from groundfish test fisheries, 23% from herring test fisheries, 20% from salmon test fisheries and 1% from shellfish test fisheries in FY2005.

INTRODUCTION

This document describes the use of Test Fish Funds in the Southeast Region for FY 2005. Each project that generates or expends Test Fish Funds is described, including the primary objectives and how the sale of fish and contracting of vessels is handled for that project.

Use of the Test Fish Fund is authorized by the Alaska State Legislature. The concept of the Test Fish Fund is that revenues are generated from the sale of fish to offset the expenses of certain projects designated as Test Fish Projects. As part of their data collection, these projects harvest fish that are sold to offset expenses and prevent waste. Also included are projects such as catch sampling, stock assessment surveys, and fishery monitoring. Some test fish projects have been added during the last ten years because of general fund cuts and development of new fisheries.

Because these projects are funded by the harvest of fishery resources that would otherwise be available to be harvested by the commercial fishery, it is incumbent upon the department to look for the most efficient means to harvest and sell fish as well as the most cost effective means to operate projects that rely on Test Fish Funds. It is also incumbent on the department not to harvest fishery resources when stocks are depressed or when additional harvest is not prudent or necessary. For this reason some projects may not operate and generate revenues every year. It should also be noted that due to lower salmon prices the bids the Department has received for our salmon test fisheries have changed in recent years. The contractors have bid a higher proportion of the proceeds to go to them to better cover their costs. This, in conjunction with the lower prices, results in less net revenue to the Department for any given number of test fish harvested.

SALMON TEST FISH PROJECTS

Sitka (11117123) and Haines (11117125) projects were deleted in FY2003.

Project Name: Ketchikan Salmon Test Fish

Budget Code: 11100711-1117121

Location: District 1

Timing: July

Contact: Phil Doherty, Ketchikan Area Management Biologist

McDonald Lake Sockeye Run Strength Analysis

Primary Objective: To evaluate the relative abundance of sockeye salmon returning to McDonald Lake in the Yes Bay area of Behm Canal approximately 20 miles north of Ketchikan. The test fish program is used to determine if the run strength of sockeye salmon to McDonald Lake is sufficient to warrant a commercial purse seine opening to target that stock. The department typically charts one commercial purse seine boat to conduct the test fishery in mid-to-late July.

For the 2005 season the total return of sockeye salmon was projected to be below the lower end of the escapement goal. Therefore, no test fishery took place for that season.

Catch and Sales: This test fish program has been ongoing since 1991 with the exception of 1996, and now 2005. In the eleven years of test fishing an average of 1,170 sockeye, 3,800 pink, and 895 chum salmon have been harvested per year for an exvessel value of \$15,500 per year. The purse seine operator is paid approximately 15% to 60% of the value. The state nets approximately \$8,000 to \$10,200 per year from this test fish program. A small carry over of FY2004 funds were expended in FY2005.

McDonald Lake is an enhanced sockeye salmon lake (lake fertilization) and can, in some years, support a directed commercial purse seine fishery. With the information obtained through the test fish program, common property commercial fisheries were conducted in the Yes Bay area in 1993 and from 1996 through 2001 with a total harvest of 532,000 sockeye, 7,000 coho, 1,455,000 pink, and 856,000 chum salmon and an approximate exvessel value of \$7,900,000. Approximately 35 purse seine vessels have participated on a yearly basis. No directed fishery took place in 2005.

The funds generated from the sale of fish harvested in this test fishery are used by the department to conduct aerial, foot, and skiff surveys for salmon escapement counts at McDonald Lake and surrounding Behm Canal salmon systems in late July and August. These funds have also been used to pay for the cost of monitoring the commercial fisheries in this area. Without this test fishery there would be no other way for the department to accurately gauge the incoming run strength of McDonald Lake sockeye salmon and, in some years, the department would not have the information needed to open and monitor a commercial purse seine fishery.

Table 2. Total Ketchikan Management Area salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2005	\$30.0	\$1.5	\$0.0	\$1.5	\$1.5
2004	\$30.0	\$7.5	\$4.4	\$3.2	\$3.2
2003	\$30.0	\$5.9	\$3.8	\$2.1	\$2.1
2002	\$30.0	\$20.5	\$5.9	\$14.5	\$14.5
2001	\$30.0	\$35.8	\$10.8	\$25.0	\$25.0
2000	\$30.0	\$26.3	\$9.4	\$16.9	\$16.9
1999	\$15.0	\$9.4	\$1.3	\$8.1	\$8.0
1998	\$15.0	\$17.5	\$1.0	\$16.5	\$16.2
1997	\$46.8	\$0.0	\$0.0	\$0.0	\$0.0
Average	\$28.53	\$13.66	\$4.07	\$9.59	\$9.54

Project Name: Petersburg-Wrangell Salmon Test Fish

Budget Code: 11100711-11117122

Location: Section 9-B

Timing: Late June and July

Contact: William Bergmann, Petersburg Area Management Biologist

Point Kingsmill and Point Gardner Pink Salmon Abundance Fisheries

Primary Objectives: The primary objectives of these test fisheries are to: 1) To assess the strength of the pink salmon return, 2) determine the run timing through sex ratio sampling and 3) obtain revenue for managing the commercial purse seine fishery in the Petersburg-Wrangell Management Area. Test fishing, combined with other run indicators, is used to decide if purse seining is justified in District 10 and Section 9-B (Frederick Sound and lower Stephens Passage). The department charters two commercial purse seine boats to conduct the test fisheries at Kingsmill Pt. and Pt. Gardner over a four to five-week period from late June to late July.

Catch and Sales: This test fish program has been conducted since 1989. The average annual harvest and total revenue for the past nine fiscal years of test fishing from 1996 through 2005, when the fishery has been consistently operated, is 1,400 sockeye, 500 coho, 46,000 pink, and 18,000 chum salmon for an ex-vessel value of \$80,600 per fiscal year. The purse seine operator is paid a percentage of the catch depending upon their bid with a maximum dollar amount per day. Because of fluctuating values of salmon, the revenue the state obtains for management purposes varies significantly but averages approximately 60% of the total value.

Fund Use: The revenue generated from this test fishery pays for, in order of importance, the vessel charters to catch the fish, aerial escapement surveys in the Petersburg-Wrangell Management Area, vessel charters for conducting foot surveys of streams in the management area, personnel costs for seasonal employees conducting escapement surveys of salmon streams and tools, repairs, and project supplies associated with stream surveying and salmon management.

Table 3. Total Petersburg-Wrangell Management Area salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2005	\$60.0	\$58.2	\$28.7	\$29.5	\$26.1
2004	\$41.6	\$41.6	\$25.7	\$15.9	\$15.9
2003	\$102.8	\$39.6	\$20.4	\$19.3	\$19.3
2002	\$72.0	\$71.9	\$23.8	\$48.1	\$48.1
2001	\$120.0	\$120.3	\$38.8	\$81.5	\$68.8
2000	\$150.0	\$150.2	\$64.3	\$85.9	\$86.0
1999	\$43.3	\$99.4	\$55.5	\$43.9	\$60.9
1998	\$43.3	\$108.1	\$37.8	\$70.3	\$60.3
1997	\$43.3	\$36.1	\$20.5	\$15.6	\$18.0
Average	\$75.1	\$80.6	\$35.1	\$45.6	\$44.8

Project Name: Juneau Salmon Test Fish

Budget Code: 111000711-11117124

Location: District 12

Timing: Late June–Early July

Contact: Kevin Monagle, Juneau Area Management Biologist

Hawk Inlet

Primary Objectives: A purse seine test fishery is operated in late June and July to assess the run strength of northbound pink salmon returns in northern Chatham Strait. The Northern Southeast Seine Fishery Management Plan [5 ACC 33.366] specifies that fishing north of Point Marsden in Chatham Strait during July is only allowed when a harvestable abundance of pink salmon is observed. The plan also mandated that open areas and times must consider conservation concerns for all species in the area. Catches in the Hawk Inlet test fishery are one of the principle tools used to make this assessment. Since 1994 the test fishery has become standardized, with test sets conducted at specific locations for specific lengths of time. Information collected includes catch by species by location along this shoreline (Hawk Inlet Shoreline), pink salmon sex ratio (aids in determining run timing), and age, sex, and stock composition information for species of interest.

Catch and Sales: This test fishery has been occurring since 1978. The purse seine operator is paid a percentage of the catch depending upon their bid with a maximum dollar amount per day. In July 2004(FY 2005) the contractor harvested 1,731 sockeye, 155 coho, 16,152 pink, and 8,903 chum salmon during three fishing days spread out over three weeks. Revenues totaled \$30,517. This amounted to \$16,000 or 52% of the gross revenue to the contractor.

Fund Use: Funds generated from this test fishery are used to charter purse seine vessels, to conduct aerial and foot escapement surveys of salmon systems in northern Southeast Alaska during late July through September, and to cover costs of monitoring the commercial purse seine fishery in the area.

Alsek River

Primary Objectives: Following a prolonged period of stock rebuilding efforts and due to large forecast king salmon returns on the Taku and Sitkine Rivers the Transboundary River Panel of the US-Canada Pacific Salmon Treaty negotiated an abundance based fishing regime and re-opened fisheries in 2005. To generate useful information toward developing an abundance based king salmon fishery on the Alsek River, a test fishery was initiated in FY2005. The test fishery provided the opportunity to collect genetic samples of king salmon throughout in late May and throughout June, 2005. Genetic identification of the proportion of the Klukshu River returns, where escapement is now enumerated by a weir in Canada, would help in determining the proportion of this stock harvested in potential future fisheries which target returns surplus to escapement goals.

Catch and Sales: A test fishing contract was issued providing for the harvest of up to 500 king salmon in 2005. 422 king salmon were harvested over a six week period from the last week of May through June. Total revenues were \$18,023 of which \$16,664 was reimbursed to the contractor and \$1,359 was net revenue for the State.

Fund Use: Net revenues from this project will be applied to aerial surveys of king salmon escapements to the Alsek River next Spring.

Table 4. Total Juneau/Yakutat Management Areas salmon test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2005	\$60.0	\$57.5	\$32.7	\$24.8	\$17.7
2004	\$25.0	\$16.4	\$14.7	\$1.8	\$1.8
2003	\$25.0	\$13.1	\$8.6	\$4.5	\$1.0
2002	\$25.0	\$11.8	\$6.3	\$5.5	\$5.1
2001	\$25.0	\$21.5	\$5.6	\$15.9	\$15.9
2000	\$25.0	\$26.4	\$9.5	\$16.9	\$16.9
1999	\$25.0	\$12.4	\$5.9	\$6.5	\$6.5
1998	\$25.0	\$10.9	\$5.7	\$5.2	\$5.2
1997	\$43.7	\$23.4	\$8.6	\$14.8	\$14.8
Average	\$31.0	\$21.5	\$9.7	\$10.7	\$9.4

HERRING TEST FISH PROJECTS

Samples are collected by commercial herring vessels to obtain a more accurate forecast of the spawning biomass from which the commercial fishery quotas are determined. Size at age information from test fisheries may be applied directly to the age structured analysis (ASA) computer model that is used to set the quota for the following year's fisheries. As the Alaska Board of Fisheries (Board) has adopted regulations for new herring fisheries in Southeast Alaska the department has incurred additional costs associated with the Southeast herring management and assessment programs. Relatively recent fisheries include a sac roe fishery in Hobart Bay (1997) and spawn-on-kelp pound fisheries in Craig (1992), and Hoonah Sound (1990). Test fish revenues have covered these increased management and stock assessment costs over the past several years. The Board adopted three new fisheries in January 2003. Those fisheries were a sac roe seine and gillnet fishery (alternating years) in West Behm Canal and spawn-on-kelp pound fisheries in Ernest Sound and Tenakee Inlet. Increased herring test fishery revenues will also offset increased costs associated with those new fisheries beginning in FY2004. Additionally,

general fund budget cuts have reduced the scale of stock assessment and management support programs in all the management areas of Southeast Alaska.

Southeast Alaska herring test fishery receipts and expenditures were coded to one code, 11100711-11117177, prior to FY2000. This code received revenue and supported herring management and stock assessment costs for four area offices (Ketchikan, Petersburg, Sitka, and Juneau). Beginning in FY2000 this one code was split into four separate codes to facilitate expenditure tracking and revenue deposits. Location specific authorizations, revenues, and expenditures are summarized below for FY2005. Pooled historical Region 1 information is also summarized:

Table 5. Southeast Alaska herring test fishery summary.

Fiscal Year	Location	Authorization	Gross Revenue^a	Contractor Cost	Net Revenue	Net Expenditures
2005	Ketchikan	\$25.0	\$24.8	0	\$24.8	\$17.1
	Petersburg	\$20.0	\$17.1 ^a	0	\$17.1	\$13.7
	Sitka	\$65.0	\$61.3	0	\$61.3	\$50.6
	Juneau	\$35.0	\$30.7	0	\$30.7	\$28.1
2005	Region-Wide	\$145.0	\$134.0	0	\$134.0	\$109.5
2004	Region-Wide	\$123.0	\$62.1	0	\$62.1	\$97.4
2003	Region-wide	\$85.0	\$56.9	0	\$56.9	\$65.9
2002	Region-wide	\$85.0	\$112.1	0	\$112.1	\$101.7
2001	Region-wide	\$95.0	\$86.0	0	\$86.0	\$92.7
2000	Region-wide	\$96.8	\$92.0	0	\$92.0	\$93.6
1999	Region-wide	\$96.8	\$62.7	\$8.5	\$54.2	\$54.2
1998	Region-wide	\$96.8	\$72.8	\$0.4	\$72.4	\$72.4
	FY98-05	\$102.9	\$84.8	\$1.1	\$83.7	\$85.9
	Average					

^aA bid was received for the District 10 sac roe gillnet fishery however the contractor did not produce any product or revenue due to low roe percentages. The contractor agreed to expand the test fishery in District 11 and successfully completed the contract in the alternate location.

Herring test bids from 1996 to 1999 were based on percent value of the catch awarded to the contractor. Since 2000, herring sac roe test bids have been based on a fixed amount of revenue the department felt was required to manage the fisheries and conduct stock assessment. Bids were expressed in tons of herring and the minimum bidder won the contract. Recent herring spawn-on-kelp test fisheries have been bid based on percent value of catch awarded to the contractor.

Region I Commercial Fisheries Division was required to cut General Fund budgets by \$125,000 for FY2000. Those cuts were distributed across several codes, several of which were herring management and stock assessment codes. The total GF cut to Southeast Alaska herring projects was \$40,000, \$10,500 of which was to Regional stock assessment programs and the balance spread across area offices. Because of these budget reductions, Commercial Fisheries Division increased test fish revenues in subsequent years.

The department discussed the issue of increased costs to manage new commercial herring fisheries at the January 2003 Board meeting. The department indicated there were no unallocated General Funds available to manage any new fisheries and that those costs would be borne by increased test fish revenue.

Public testimony during Board committee work indicated consensus industry support for the department to generate additional revenue through herring test fisheries in the absence of new funding from other sources.

Project Name: Ketchikan Area Herring Test Fish

Budget Code: 11100711-11117174

Location: Ketchikan Management Area, Southeast Alaska (District 1)

Timing: January – April

Contact: Phil Doherty, Ketchikan Area Management Biologist

Sac Roe

Primary Objectives: The primary objectives of the Ketchikan herring test fish program are: 1) to generate revenues needed to assess Ketchikan area herring stocks in West Behm Canal, Kah Shakes/Cat Island, Craig/Klawock, and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the West Behm Canal stock.

Catch and Sales: Beginning in 2000, Ketchikan's General Fund herring management budgets were cut by \$9,000. To compensate for that reduction the West Behm Canal herring test fishery went from a yearly average value (1994–1999) of \$20,000 per year and an average harvest of 20 tons to \$30,000 and an average of 40 tons of herring in 2000 and 2001. The total harvest in the test fishery in 2002 was 106.95 tons. During these test fisheries the price of herring sac-roë has fluctuated from \$2,660/ton in 1996 to as little as \$320/ton in 1998. In 2001, the price received by the department's test fishery was \$700/ton and in 2002 was \$300/ton.

The GHL for the 2005 returns of herring to West Behm Canal was forecast to be under the minimum threshold level needed to conduct a commercial fishery, therefore, no herring test took place in the area.

With these large swings in the exvessel value of sac roë it is important for the department to have a reliable budget in order to plan for and properly manage and assess the herring stocks in the Ketchikan management districts. If revenue from test fisheries were not available, the Ketchikan herring management budget (code 11100011-1110171) would have to be increased by other funding sources by approximately \$30,000.

Fund Use: Revenues from test fisheries have historically been used to support management of the sac roë gillnet fisheries at Cat Island-Kah Shakes and to assess Ketchikan area herring stocks. Typical expenses funded by test fishing include aerial surveys, age, sex, size sampling, and vessel charters.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Section 3-B spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Section 3-B spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement the fishery.

There is considerable uncertainty regarding production and sales of herring spawn-on-kelp fisheries, and prices are generally not known until post-season sales have been concluded. The department solicited bids from prospective test fishermen through a Request for Proposals process where bids were based on a

percentage of sales that would be paid to the department, with remaining sales available to compensate time spent and costs incurred by the fishermen.

Catch and Sales: : The winning bid for the 2005 season was 64.9% of the gross earnings going to the winning bidder, with the State receiving 35.1% of the total. This was based on a maximum number of 2,000 blades of *Macrocystis* kelp being used. The State received \$4,628.08 for the 2005 test fishery in FY06.

Fund Use: Revenues from this test fishery will mainly be used to support management of the Section 3-B Herring spawn-On-Kelp fishery (229 limited entry permits) and to monitor spawning in the other major stocks in the management area. Expenses funded by test fishing include aerial surveys, vessel charters, fishery management expenses such as gas, food, and outboard repairs, and hiring technicians to collect and analyze biological samples.

Project Name: Petersburg Area Herring Test Fish

Budget Code: 11100711-11117175

Location: Petersburg Management Area, Southeast Alaska (Districts 7 and 10)

Timing: January – April

Contact: William Bergmann, Petersburg Area Management Biologist

Sac Roe

Primary Objectives: The primary objectives of the Petersburg herring test fish program are: 1) to generate revenues needed to assess Petersburg-Wrangell area herring stocks in Hobart Bay/Port Houghton, Ernest Sound, and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Hobart/Houghton stock.

The department charters one herring gillnetter to catch the fish and this usually requires less than 12 hours. Samples are collected by commercial herring gillnet vessels and by ADF&G personnel to gather data for a more accurate forecast of the spring spawning biomass from which the commercial fishery quotas are determined. Size at age information from test fisheries and pre-fishery throw net samples are used in the age structured analysis (ASA) computer model that is used to set the quota for the following year's fisheries.

Catch and Sales: This test fish program has been conducted intermittently since 1993. In the seven years of test fishing an average of 32 tons of herring have been harvested per year for an ex-vessel value of \$28,700/year. Beginning in 2000, Petersburg's General Fund herring management budgets were cut by \$8,000. There were no sac roe herring test fisheries conducted in the Petersburg-Wrangell management area in 2002, 2003 or 2004. An attempt was made to conduct test fishing in Hobart Bay in FY 2005 but it was unsuccessful. Test fishing income was derived from the sac roe test fishery in District 11.

Fund Use: Revenues from test fisheries have mainly been used to support management of the Port Houghton-Hobart Bay sac roe fishery (117 limited entry permits) and to monitor spawning in the other major stocks in the management area. Expenses funded by test fishing include aerial surveys, vessel charters, fishery management expenses such as gas, food, and outboard repairs, and hiring technicians to collect and analyze biological samples.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Ernest Sound spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Ernest Sound spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement the fishery. During the first test fishery in 2004, the department contracted for the operation of four herring pounds. Due to problems the contractor had, no spawn on kelp was harvested.

Catch and Sales: No catches were made and no sales occurred in FY05.

Fund Use: Department expenses associated with the Ernest Sound herring spawn-on-kelp fishery, which was created in 2004, are not supported by general funds so test fishing is expected to pay for the expense of managing this fishery.

Project Name: Sitka Area Herring Test Fish

Budget Code: 11100711-11117176

Location: Sitka Management Area, Southeast Alaska (District 13)

Timing: January – April

Contact: Dave Gordon, Sitka Area Management Biologist

Sac Roe

Primary Objectives: The primary objectives of the Sitka sac roe herring test fish program are: 1) to generate revenues needed to assess and manage the herring stock in Sitka Sound and other areas, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Sitka Sound stock which provide a basis for understanding of population trends, setting harvest quotas and stock forecasting.

Catch and Sales: Herring test fishing to support Sitka herring management began in 1992 and has continued annually since that time. From the outset of the program until 2001, the test fishery took place in the winter and the fish were sold as frozen bait. In response to General Fund budget cuts of \$8,500 in 2000, and an additional \$8,000 in 2004, the department has increasingly relied on test fish program revenues. Beginning in 2001 test fishery herring was sold as sac roe to maximize their value and reduce the amount of fish harvested. In 2004, a small winter bait test fishery was reinstated as a means to reduce the cost of obtaining a winter herring sample necessary for stock assessment. The winter test fishery harvested 50 tons generating \$6,000. The FY2005 sac roe test fishery was bid out in number of tons necessary to generate \$20,000. The winning bid was 43 tons but ultimately 58.5 tons were harvested resulting in an additional \$10,354 of revenue not received until FY 2006. In addition, the 2005 common property sac roe fishery GHL was completed under a cooperative agreement. As a disincentive to exceeding the GHL, all harvests over the target amount in the cooperative fishery was forfeited to the department resulting in test fish revenues of \$16,545 received in FY 2005 and an additional \$13,423 was received in FY2006.

Fund Use: Revenues from test fisheries have mainly been used to support management of the Sitka Sound sac roe fishery and to monitor spawning in the other major stocks in the management area. Expenses funded by test fishing include aerial surveys, vessel charters, fishery management expenses such as gas, food, and outboard repairs, and hiring technicians to collect and analyze biological samples.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Hoonah Sound spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Hoonah Sound spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement the fishery. The initial spawn-on-kelp test fishery occurred in 2003 and was continued in 2004 and 2005. As new spawn-on-kelp fisheries have begun elsewhere in the region, the department has worked to devise an appropriate test fish program that can generate revenues needed and continue fishery development. The ex-vessel value of the Hoonah Sound common property spawn-on-kelp fishery has been around \$2.0 million for the past two years.

Catch and Sales: In Hoonah Sound during the spring of 2004 a total of seven test fishery herring pounds produced 28,732 pounds of spawn-on-kelp product and generated revenues of \$33,097 received in FY2005. In the spring of 2005, three test fish pounds were contracted producing 15,695 pounds of product and generating \$16,989 for the department and received in FY2006.

Fund Use: Department expenses associated with the Hoonah Sound herring spawn-on-kelp fishery, which began in 1990, have been supported by general funds, in part made available by the advent of herring test fishing used to supplement costs of the sac roe herring fishery in Sitka Sound. In 2003 the Board of Fisheries created new herring spawn-on-kelp opportunities in Tenakee Inlet and Earnest Sound. The department has found it necessary to provide for these new fisheries by further re-allocation of available funds and by new test fisheries. A spawn-on-kelp test fishery was first initiated in Hoonah Sound since this has now become an established fishery with predictable spawning and fishing areas and good prospects for a success. Revenues from the FY 2003 test fishery were received in FY 2004. Revenues exceeded expenses by \$6,169, so those revenues were carried forward to FY 2004. In FY 2004 test fishery funds generated by the Hoonah Sound test fishery were received in FY2005 and due to shortfalls from developing test fisheries in other portions of the region, those revenues will be used to offset costs for those areas where new fisheries have been implemented without offsetting revenues. The Sitka Management Area will start FY 05 with test fish revenues of \$14,012 available. Expenses funded by test fishing include aerial surveys and fishery management expenses associated with providing for a fishery in a remote area.

Project Name: Juneau Area Herring Test Fish

Budget Code: 11100711-11117177

Location: Southeast Alaska (Districts 11 and 12)

Timing: April–May

Contact: Kevin Monagle, Juneau Area Management Biologist

Sac Roe

Primary Objectives: The primary objectives of the Juneau herring test fish program are: 1) to generate revenues needed to assess and manage Juneau area herring stocks and fisheries in Seymour Canal, Tenakee, and other local stocks, and 2) to collect biological samples (fecundity, age-sex-size and weight-at-age) from the Seymour Canal stock.

Samples are collected by commercial gillnet vessels in the Juneau management area. Size at age, age composition, and fecundity information from test fisheries may be applied directly to the age structured analysis (ASA) computer model that is used to set the quota for the following year's fisheries.

Catch and Sales: Beginning in 2000, Juneau's General Fund herring management budgets were cut by \$4,000. To offset that reduction and to maintain existing test fishery revenue, test fishery harvests were increased. Unfortunately the test fishery is not successful every year. In the spring of 2003 for example, no test fish revenue was generated due to a lack of opportunity to the contractor. This meant that over \$15,000 for Juneau area herring management and assessment had to be made up from other sources. For this fiscal year, in the spring of 2005, the department received \$15,000 from the successful contractor with a bid of 47 tons of herring. The price received by the department was \$319/ton. During these test fisheries the price of herring sac-roe has fluctuated from \$2,660/ton in 1996, to \$200/ton in 2004.

Fund Use: Revenues from the test fisheries are to be used mainly to support management of the Seymour Canal gillnet sac roe fishery and assess other herring stocks in the Juneau management area. Typical expenses funded by test fishing include aerial surveys, vessel charters, and hiring technicians to collect and analyze biological samples. An increased allocation of general funds would reduce the department's reliance on test fish revenues.

Spawn-on-Kelp

Primary Objectives: The primary objectives of the Tenakee Inlet spawn-on-kelp test fishery are: 1) to generate revenues needed to manage and develop the Tenakee Inlet spawn-on-kelp fishery and 2) to generate additional information about herring use, production data, or gear characteristics to continue improvement of the fishery. This is the third year of a SOK fishery in Tenakee Inlet and the second test fishery. Similar to Hoonah Sound, there has been considerable interest in evaluating optimum gear size and in optimizing kelp allocations as ways to maximize production and value of this fishery. The ex-vessel value of the Tenakee Inlet common property fishery was approximately \$890,000 in spring 2004, and \$513,000 in 2005. Although there was more spawn-on-kelp production in 2005 than 2004, the market was considerably down.

Catch and Sales: The first test fishery in the spring of 2004 generated revenues of approximately \$9,900 that were received in FY 05 from the sale of 9,100 lbs of spawn-on-kelp product. The spring of 2005 Tenakee SOK test fishery generated revenues of approximately \$15,800 that were received in FY06 from the sale of 15,353 lbs of spawn-on-kelp product. The department contracted for the operation of three herring pounds on the basis of a percentage of the value of gross earnings. Since these revenues were received following the herring season, they will be used to seed management costs and reduce test fishing necessary to support management costs in the spring of 2006.

Fund Use: In 2003 the Board of Fisheries created new herring spawn-on-kelp opportunities in Tenakee Inlet and Earnest Sound. The department has found it necessary to provide for these new fisheries by further re-allocation of available funds and by new test fisheries. Therefore a spawn-on-kelp test fishery was initiated in Tenakee Inlet in 2004. Expenses funded by test fishing include aerial surveys and fishery management expenses associated with providing for on the grounds fishery management in a remote area.

GROUND FISH TEST FISH PROJECT

Project Name: Southeast Groundfish Test Fish

Budget Codes: 11100711-11117187 and 11100711-11117188

Location: Southeast Alaska (Districts 1–16)

Timing: January–December

Contact: Tory O’Connell, Groundfish Project Leader

Primary Objectives: To estimate abundance of sablefish stocks in Southeast Alaska and to set appropriate harvest levels. Annual stock assessment surveys have been conducted since 1988 in southern (Clarence Strait) and northern Southeast (Chatham Strait) to collect abundance and biological information on stock structure and condition. Using longline gear, annual trends in catch per unit effort, size, and age structure of these sablefish populations are used to help determine the sablefish quota for the following year. The department contracts five commercial fishing vessels to conduct the survey each year, three in Chatham Strait and two in Clarence Strait. In 2005 we did not conduct the Clarence Strait survey but intend to conduct it again in FY06. In addition to the longline surveys we implemented a pot-vessel survey in Chatham Strait in FY01 to mark and release sablefish for recapture in the longline fishery and a pilot project for PIT tagging of sablefish. These projects were partially funded under Nearshore III federal monies but some of the charter cost and equipment costs were covered under test fish funds. The mark and release survey will continue and will rely on test fishery revenues.

The sablefish fisheries are the most valuable state-managed groundfish fisheries in Southeast, with an estimated ex-vessel value of \$6 million in FY05. The fisheries are limited entry: current participation is approximately 108 permit holders in NSEI and 28 permit holders in SSEI. At present there is no state general fund support for these fisheries.

Catch and Sales: The Southeast groundfish project relies on the revenues generated by the test fish project to fund the annual stock assessment surveys. The majority of the revenue is used to pay for charter vessels and associated staff sea duty and gear costs: in FY2005, the cost of chartering three vessels for the NSEI area survey was \$65,575 and for partially funding the pot-vessel survey was \$64,500. Other expenses in FY2005 included survey gear, sampling supplies, tagging equipment, travel and personnel costs for the surveys, project support expenses, and continuing the port-sampling program to sample commercial catches for age and length data. Because Nearshore funding is no longer available for the tagging survey, test fish funds from FY04 were set aside and rolled forward to FY05 to pay for this portion of the Chatham assessment, a cost of approximately 146K.

Table 6. Southeast Alaska groundfish test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2005	\$336.5	\$336.5	\$137.2	\$199.3	\$116.3
2004	\$349.5	\$349.5	\$103.0	\$246.5	\$193.9
2003	\$278.3	\$314.8	\$172.2	\$142.6	\$116.3
2002	\$290.0	\$290.0	\$159.0	\$131.0	\$130.5
2001	\$260.0	\$259.6	\$176.7	\$82.9	\$82.9
2000	\$194.3	\$193.2	\$135.8	\$57.4	\$57.4
1999	\$196.2	\$174.4	\$111.2	\$63.2	\$63.2
1998	\$175.1	\$169.7	\$111.6	\$58.1	\$58.1
1997	\$61.8	\$130.3	\$105.9	\$24.4	\$24.4
97–04					
Average	\$225.7	\$235.2	\$134.4	\$100.8	\$90.8

SHELLFISH TEST FISH PROJECTS

Project Name: Southeast Shellfish Test Fish

Budget Code: 11100711-11317193

Location: Southeast Alaska (Districts 1-16)

Timing: September

Contact: Gretchen Bishop, Shellfish Project Leader

Primary Objectives: Primary objectives are to describe stock strength of spot and coonstripe shrimp in major commercial fishing areas of Southeast Alaska. Pot shrimp stock assessment surveys have been conducted annually in September since 1997. Over this time period, the areas surveyed have expanded from District 3 only in 1997 to Districts 3, 7, 12, and 13 in 2002. Currently 5-day fishery-independent stock assessment surveys are conducted using shrimp pots in each of Districts 3, 7, 12, and 13. The catch rate and size composition of shrimp captured is determined. Trends in this information are used along with fishery catch rate and sampling information to adjust preseason guideline harvest levels. In FY05, the survey was conducted aboard a commercial vessel in Districts 12 and 13 and aboard a department vessel in Districts 3, and 7.

The Pot shrimp fishery is limited entry, with 331 permit holders and generated an ex-vessel value of \$4.3 million in 2004 (FY05).

Catch and Sales: In FY05, product was retained for sale on both state and commercial vessels. The cost recovery conducted defrays survey costs and prevents waste of shrimp due to handling mortality after sampling. Survey expenses include charter vessels, equipment and supplies, sea duty, and staff travel to and from survey vessels. Federal monies from Nearshore II and Nearshore V defrayed survey costs in FY01, FY02, and FY03. As those monies are no longer available, \$2.0K was rolled over from FY03 to FY04 to mitigate their loss.

Table 7. Southeast Alaska shellfish test fishery summary.

Fiscal Year	Authorization	Gross Revenue	Contractor Cost	Net Revenue	Net Expenditures
2005	\$5.2	\$3.1	\$0.0	\$3.1	\$5.1
2004	\$7.0	\$5.6	\$0.0 ^c	\$5.6	\$3.6
2003	\$36.0	\$8.0	\$0.0 ^d	\$8.0	\$7.2
2002	\$40.0	\$11.0	\$0.0 ^c	\$11.0	\$9.7
2001	\$40.0	\$10.2	\$0.0 ^b	\$10.2	\$10.2
2000	\$38.5	\$11.5	\$4.9 ^a	\$6.6	\$6.6
1999	\$100.6	\$11.6	\$11.6	\$0.0	\$0.0
1998	\$100.6	\$20.0	\$20.0	\$0.0	\$0.0
1997	\$31.5	n/a	n/a	n/a	n/a
Average 1997–2005	\$44.4	\$10.1	\$10.5	\$5.6	\$5.3

^a Value of product; contractor cost of \$9.2 K charged to code 11110106.

^b Value of product; contractor cost of \$23.4 K charged to code 11311088.

^c Value of product; contractor cost of \$24 K charged to code 11319019.

^d Value of product; contractor cost of \$22 K charged to code 11311095.

^e Value of product; contractor cost of \$10 K charged to code 11311095

The department collects additional revenue from the sale of buoy stickers and buoy tags that are required by regulations adopted by the Board of Fisheries. Fishermen are charged a fixed amount per tag, which defrays the cost of the stickers or tags and the cost of administering sticker and tag sales.

Table 8. Southeast Alaska test fishery summary.

Project	FY2005 Revenue	FY2005 Expenditures	FY2004 Revenue	FY2004 Expenditures	FY2003 Revenue	FY2003 Expenditures	Average Revenue 2003–05	Average Expenditures 2003–05
Salmon	\$117.3	\$111.2	\$65.6	\$65.5	\$58.6	\$58.6	\$80.5	\$78.4
Herring	\$133.9	\$109.5	\$62.1	\$97.4	\$56.9	\$65.9	\$84.3	\$90.9
Groundfish	\$336.5	\$253.5	\$349.5	\$296.9	\$314.8	\$288.5	\$333.6	\$279.6
Shellfish	\$3.1	\$3.1	\$5.6	\$5.6	\$8.0	\$8.0	\$5.6	\$5.0
Regional Totals	\$619.4	\$503.5	\$482.8	\$465.4	\$438.3	\$386.4	\$513.5	\$451.8

* Total Region I Commercial Fisheries test fish receipt authority in FY00 was \$1,138.7. In FY01, \$500.0 of Region I Test Fish authority was transferred to Westward Region, Region I total test fish receipt authority has been \$650.1 from FY01 through FY2004. For FY2005, Region I total test fish receipt authority was reduced to \$600.0 and crab, shrimp and herring buoy stickers and pot tag revenue was removed from test fish authority and placed in SDPR beginning. A total of \$26.4 of shellfish buoy stickers was carried over to FY2005. This amount is included in the FY2005 Region Total, but not included as Test Fish Revenues for FY2005.

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